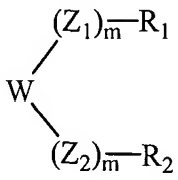
1. A compound of Formula 1:



(1)

a pharmaceutically acceptable salt, hydrate, solvate, crystal form, diastereomer, prodrug, or mixture thereof, wherein

one of R_1 or R_2 may be hydrogen or straight or branched chain $(C_1\text{-}C_7)$alkyl, in which the branched alkyl chains are allowed to also form a 3-7 member heteroalkyl or alkyl ring;

R_1 or R_2 may each independently be

$(\text{cyclo}(C_3\text{-}C_6)\text{alkyl})\text{methyl}$;

$(C_1\text{-}C_6)$perhaloalkyl;

$(C_1\text{-}C_6)$alkoxy;

$(C_1\text{-}C_6)\text{alkyloxy-}(C_1\text{-}C_6)\text{alkoxy}$;

sulfonamide;

mono- or $\text{di}((C_1\text{-}C_6)\text{alkyl})\text{amino}$;

mono- or $\text{di}((C_1\text{-}C_6)\text{alkyl})\text{amino}(C_1\text{-}C_6)\text{alkyl}$;

phenyl, benzyl, or heteroaryl which may be unsubstituted, mono-, di-, or trisubstituted with one or more of

hydroxy, nitro, cyano, amino, halogen,

$(C_1\text{-}C_6)$alkyl, $(C_1\text{-}C_6)$perhaloalkyl, $(C_1\text{-}C_6)$alkoxy, $(C_1\text{-}C_6)\text{alkyloxy-}(C_1\text{-}C_6)$alkoxy, mono- or $\text{di}((C_1\text{-}C_6)\text{alkyl})\text{amino}$, mono- or $\text{di}((C_1\text{-}C_6)\text{alkyl})\text{amino}(C_1\text{-}C_6)\text{alkyl}$, $\text{amino}(C_1\text{-}C_6)\text{alkyl}$,

benzamide which may be unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, $(C_1\text{-}C_6)$alkyl, or $(C_1\text{-}C_6)$alkoxy,

benzenesulfonamide which may be unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, $(C_1\text{-}C_6)$alkyl, $(C_1\text{-}C_6)$perhaloalkyl, or $(C_1\text{-}C_6)$alkoxy,

heteroaryl which may be unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, (C_1-C_6)alkyl, (C_1-C_6)perhaloalkyl, (C_1-C_6)alkoxy, (C_1-C_6)alkyloxy-(C_1-C_6)alkoxy, mono- or di((C_1-C_6)alkyl)amino, mono- or di((C_1-C_6)alkyl)amino(C_1-C_6)alkyl,

mono- or dibenzylamino(C_1-C_6)alkyl wherein the benzyl may be unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, or halogen,

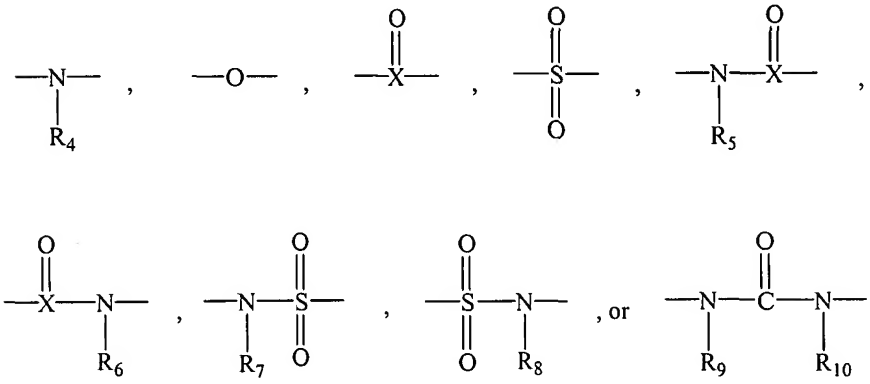
amino(C_1-C_6)alkyl, or

heteroaryl linked to the phenyl by an ether, sulfide, (C_1-C_3)carbonyl, or secondary amine;

heteroaryloxyphenyl or phenyloxyphenyl where each heteroaryl or phenyl may be independently unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, sulfonamide, (C_1-C_6)alkyl, (C_1-C_6)perhaloalkyl, (C_1-C_6)alkoxy, (C_1-C_6)alkyloxy-(C_1-C_6)alkoxy, mono- or di((C_1-C_6)alkyl)amino, or amino(C_1-C_6)alkyl;

4-phenyl- or 4-heteroaryl-1-piperazinyl where the phenyl or heteroaryl ring may be independently unsubstituted, mono-, di- or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, sulfonamide, (C_1-C_6)alkyl, (C_1-C_6)perhaloalkyl, (C_1-C_6)alkoxy, (C_1-C_6)alkyloxy-(C_1-C_6)alkoxy, mono- or di((C_1-C_6)alkyl)amino, mono- or di((C_1-C_6)alkyl)amino(C_1-C_6)alkyl);

Z_1 and Z_2 are each independently



wherein

X is C or S, and

R_4–R_{10} are independently

hydrogen;

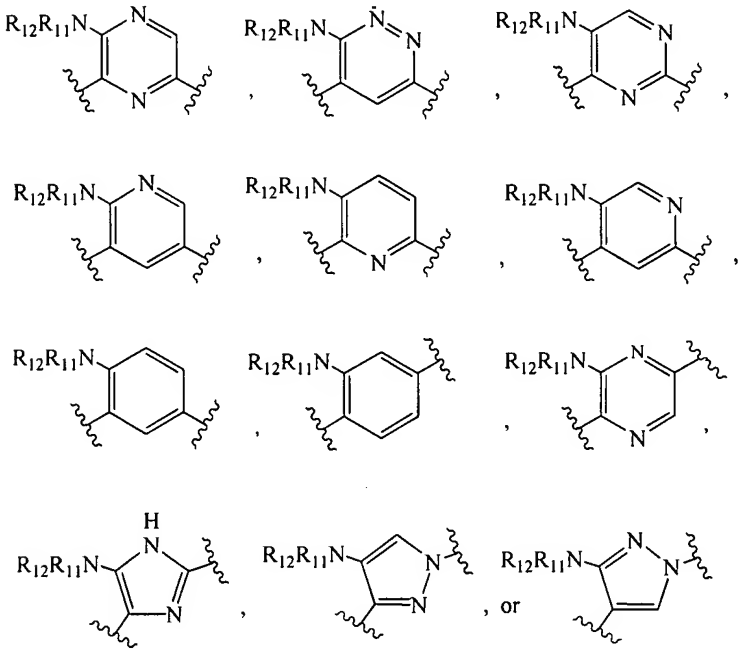
straight or branched chain (C_1-C_6)alkyl;

phenyl which may be unsubstituted, mono-, di- or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, (C_1-C_6)alkyl, (C_1-C_6)perhaloalkyl, (C_1-C_6)alkoxy, (C_1-C_6)alkyloxy-(C_1-C_6)alkoxy, mono- or di((C_1-C_6)alkyl)amino, amino(C_1-C_6)alkyl;

or heteroaryl which may be unsubstituted, mono-, di- or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, (C_1-C_6)alkyl, (C_1-C_6)alkoxy, (C_1-C_6)alkyloxy-(C_1-C_6)alkoxy, mono- or di((C_1-C_6)alkyl)amino, amino(C_1-C_6)alkyl;

each m is independently 0 or 1; and

W is a monocyclic ring having the structure



wherein

R_{11} and R_{12} are independently

hydrogen;

straight or branched chain (C_1-C_7)alkyl, in which the branched alkyl chains are allowed to also form a 3-7 member heteroalkyl or alkyl ring;

(cyclo(C_3-C_6)alkyl)methyl;

(C_1-C_6)perhaloalkyl;

sulfonamide;

mono- or di((C_1-C_6)alkyl)amino;

mono- or di((C_1-C_6)alkyl)amino(C_1-C_6 alkyl);

phenyl, benzyl, or heteroaryl which may be unsubstituted, mono-, di- or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, (C_1-C_6)alkyl, (C_1-C_6)perhaloalkyl, (C_1-C_6)alkoxy, (C_1-C_6)alkyloxy-(C_1-C_6)alkoxy, mono- or di((C_1-C_6)alkyl)amino, mono- or di((C_1-C_6)alkyl)amino(C_1-C_6)alkyl, amino((C_1-C_6)alkyl);

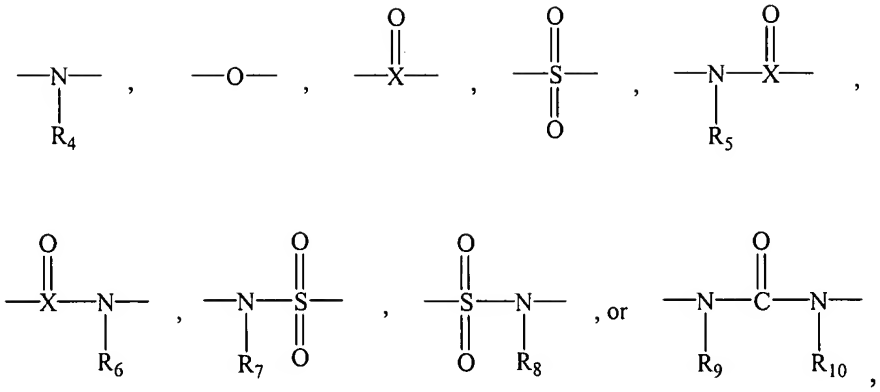
heteroaryloxyphenyl or phenyloxyphenyl where each heteroaryl or phenyl may be independently unsubstituted, mono-, di- or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, sulfonamide, (C_1-C_6)alkyl, (C_1-C_6)perhaloalkyl, (C_1-C_6)alkoxy, (C_1-C_6)alkyloxy-(C_1-C_6)alkoxy, mono- or di((C_1-C_6)alkyl)amino, amino(C_1-C_6 alkyl);

phenyl- or heteroaryl-piperazinyl where the phenyl or heteroaryl ring may be independently unsubstituted, mono-, di- or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, sulfonamide, (C_1-C_6)alkyl, (C_1-C_6)perhaloalkyl, (C_1-C_6)alkoxy, (C_1-C_6)alkyloxy(C_1-C_6)alkoxy, mono- or di((C_1-C_6)alkyl)amino, mono- or di(C_1-C_6 alkyl)amino(C_1-C_6 alkyl).

2. The compound, pharmaceutically acceptable salt, hydrate, solvate, crystal form, diastereomer, prodrug, or mixture thereof according to claim 1, wherein

one of R_1 or R_2 may hydrogen or straight or branched chain (C_1-C_7)alkyl; R_1 and R_2 may each independently be (cyclo(C_3-C_6)alkyl)methyl; (C_1-C_6)perhaloalkyl; (C_1-C_6)alkoxy; phenyl, benzyl, or heteroaryl which may be unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, (C_1-C_6)alkyl, (C_1-C_6)perhaloalkyl, (C_1-C_6)alkoxy, (C_1-C_6)alkyloxy-(C_1-C_6)alkoxy, mono- or di((C_1-C_6)alkyl)amino, mono- or di((C_1-C_6)alkyl)amino(C_1-C_6)alkyl, amino(C_1-C_6)alkyl, benzamide which may be unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, (C_1-C_6)alkyl, or (C_1-C_6)alkoxy, benzenesulfonamide which may be unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, (C_1-C_6)alkyl, (C_1-C_6)perhaloalkyl, or (C_1-C_6)alkoxy, heteroaryl which may be unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, (C_1-C_6)alkyl, (C_1-C_6)perhaloalkyl, (C_1-C_6)alkoxy, (C_1-C_6)alkyloxy-(C_1-C_6)alkoxy, mono- or di((C_1-C_6)alkyl)amino, mono- or di((C_1-C_6)alkyl)amino(C_1-C_6)alkyl, mono- or dibenzylamino(C_1-C_6)alkyl wherein the benzyl may be unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, or halogen, amino(C_1-C_6)alkyl, or heteroaryl linked to the phenyl by an ether, sulfide, (C_1-C_3)carbonyl, or secondary amine; heteroaryloxyphenyl or phenyloxyphenyl where each heteroaryl or phenyl may be independently unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, sulfonamide, (C_1-C_6)alkyl, (C_1-C_6)perhaloalkyl, (C_1-C_6)alkoxy, (C_1-C_6)alkyloxy-(C_1-C_6)alkoxy, mono- or di((C_1-C_6)alkyl)amino, or amino(C_1-C_6)alkyl; 4-phenyl- or 4-heteroaryl-1-piperazinyl where the phenyl or heteroaryl ring may be independently unsubstituted, mono-, di- or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, sulfonamide, (C_1-C_6)alkyl, (C_1-C_6)perhaloalkyl, (C_1-C_6)alkoxy, (C_1-C_6)alkyloxy-(C_1-C_6)alkoxy;

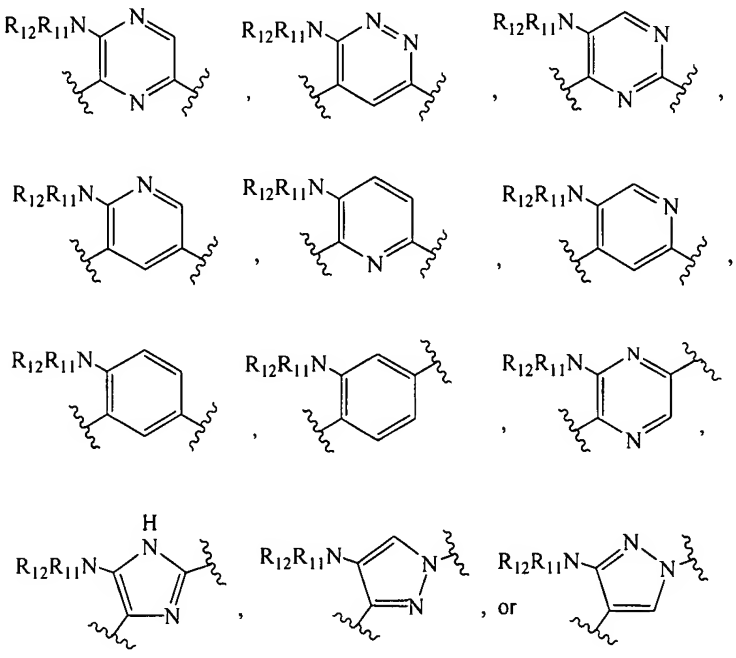
Z_1 and Z_2 are each independently



wherein X is C and R_4–R_{10} are independently hydrogen; straight or branched chain (C_1-C_6)alkyl; phenyl which may be unsubstituted, mono-, di- or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, (C_1-C_6)alkyl, or (C_1-C_6)perhaloalkyl; or heteroaryl which may be unsubstituted, mono-, di- or trisubstituted with one or more of hydroxy, nitro, cyano, amino, or halogen;

each m is independently 0 or 1; and

W is a monocyclic ring having the structure



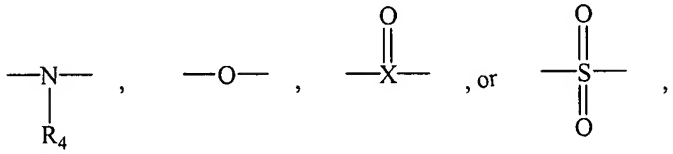
wherein R_{11} and R_{12} are independently hydrogen; straight or branched chain (C_1-C_7)alkyl, in which the branched alkyl chains are allowed to also form a 3-7 member heteroalkyl or alkyl ring; (cyclo(C_3-C_6)alkyl)methyl; (C_1-C_6)perhaloalkyl; mono- or di((C_1-

C_6)alkyl)amino, mono- or di((C_1-C_6)alkyl)amino(C_1-C_6 alkyl); phenyl, benzyl, or heteroaryl which may be unsubstituted, mono-, di- or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, (C_1-C_6)alkyl, (C_1-C_6)perhaloalkyl, (C_1-C_6)alkoxy, (C_1-C_6)alkyloxy-(C_1-C_6)alkoxy, mono- or di((C_1-C_6)alkyl)amino, mono- or di((C_1-C_6)alkyl)amino(C_1-C_6)alkyl, amino((C_1-C_6)alkyl); heteroaryloxyphenyl or phenyloxyphenyl where each heteroaryl or phenyl may be independently unsubstituted, mono-, di- or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, sulfonamide, (C_1-C_6)alkyl, (C_1-C_6)perhaloalkyl, or (C_1-C_6)alkoxy; phenyl- or heteroaryl-piperazinyl where the phenyl or heteroaryl ring may be independently unsubstituted, mono-, di- or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, or di(C_1-C_6 alkyl)amino(C_1-C_6 alkyl).

3. The compound, pharmaceutically acceptable salt, hydrate, solvate, crystal form, diastereomer, prodrug, or mixture thereof according to claim 1, wherein

one of R_1 or R_2 may be hydrogen or straight or branched chain (C_1-C_7)alkyl; R_1 and R_2 may each independently be phenyl, benzyl, or heteroaryl which may be unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, (C_1-C_6)alkyl, (C_1-C_6)perfluoroalkyl, (C_1-C_6)alkoxy, (C_1-C_6)alkyloxy-(C_1-C_6)alkoxy, mono- or di((C_1-C_6)alkyl)amino, mono- or di((C_1-C_6)alkyl)amino(C_1-C_6)alkyl, amino(C_1-C_6)alkyl, benzamide which may be unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, (C_1-C_6)alkyl, or (C_1-C_6)alkoxy, benzenesulfonamide which may be unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, (C_1-C_6)alkyl, (C_1-C_6)perhaloalkyl, or (C_1-C_6)alkoxy, heteroaryl which may be unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, (C_1-C_6)alkyl, (C_1-C_6)perfluoroalkyl, (C_1-C_6)alkoxy, (C_1-C_6)alkyloxy-(C_1-C_6)alkoxy, mono- or di((C_1-C_6)alkyl)amino, mono- or di((C_1-C_6)alkyl)amino(C_1-C_6)alkyl, mono- or dibenzylamino(C_1-C_6)alkyl wherein the benzyl may be unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, or halogen, amino(C_1-C_6)alkyl, or heteroaryl linked to the phenyl by an ether, sulfide, (C_1-C_3)carbonyl, or secondary amine; heteroaryloxyphenyl or phenyloxyphenyl where each heteroaryl or phenyl may be independently unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, sulfonamide, (C_1-C_6)alkyl, (C_1-C_6)perhaloalkyl, (C_1-C_6)alkoxy, (C_1-C_6)alkyloxy-(C_1-C_6)alkoxy, mono- or di((C_1-C_6)alkyl)amino, or amino(C_1-C_6)alkyl; 4-phenyl- or 4-heteroaryl-1-piperazinyl where the phenyl or heteroaryl ring may be independently unsubstituted, mono-, di- or trisubstituted with one or more of hydroxy, nitro, cyano, amino, or halogen;

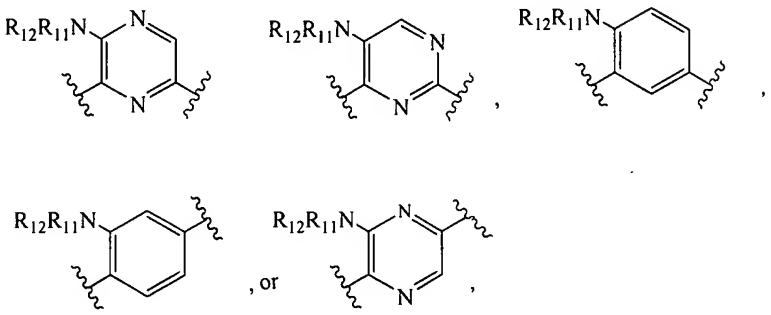
Z_1 and Z_2 are each independently



wherein X is C and R_4–R_{10} are independently hydrogen; or straight or branched chain (C_1-C_6)alkyl;

each m is independently 0 or 1; and

W is a monocyclic ring having the structure



wherein R_{11} and R_{12} are independently hydrogen; straight or branched chain (C_1-C_7)alkyl, in which the branched alkyl chains are allowed to also form a 3-7 member heteroalkyl or alkyl ring; phenyl, benzyl, or heteroaryl which may be unsubstituted, mono-, di- or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, (C_1-C_6)alkyl, (C_1-C_6)perfluoroalkyl, or (C_1-C_6)alkoxy; or heteroaryloxyphenyl or phenyloxyphenyl where each heteroaryl or phenyl may be independently unsubstituted, mono-, di- or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, sulfonamide, (C_1-C_6)alkyl, (C_1-C_6)perhaloalkyl, or (C_1-C_6)alkoxy.

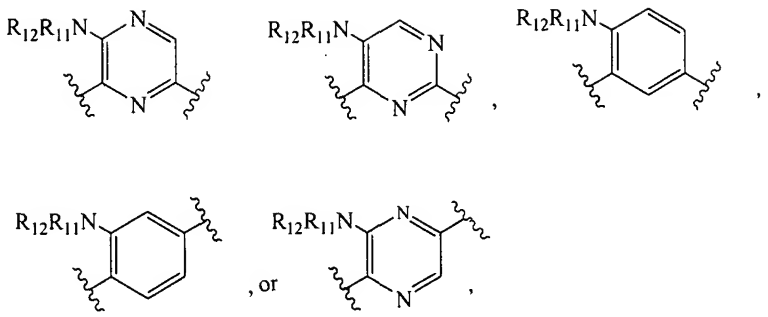
4. The compound, pharmaceutically acceptable salt, hydrate, solvate, crystal form, diastereomer, prodrug, or mixture thereof according to claim 1, wherein

one of R_1 or R_2 may be hydrogen, or R_1 and R_2 may each independently be phenyl, benzyl, or heteroaryl which may be unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, (C_1-C_6)alkyl, (C_1-C_6)perfluoroalkyl, (C_1-C_6)alkoxy, (C_1-C_6)alkyloxy-(C_1-C_6)alkoxy, mono- or di((C_1-C_6)alkyl)amino, mono- or di((C_1-C_6)alkyl)amino(C_1-C_6)alkyl, amino(C_1-C_6)alkyl, benzamide which may be unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, (C_1-C_6)alkyl, or (C_1-C_6)alkoxy, benzenesulfonamide which may be unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, (C_1-C_6)alkyl, (C_1-C_6)perhaloalkyl, or (C_1-C_6)alkoxy, heteroaryl which may be unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, (C_1-C_6)alkyl, (C_1-C_6)perfluoroalkyl, (C_1-C_6)alkoxy, (C_1-C_6)alkyloxy-(C_1-C_6)alkoxy, mono- or di((C_1-C_6)alkyl)amino, mono- or di((C_1-C_6)alkyl)amino(C_1-C_6)alkyl, mono- or dibenzylamino(C_1-C_6)alkyl wherein the benzyl may be unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, or halogen, amino(C_1-C_6)alkyl, or heteroaryl linked to the phenyl by an ether, sulfide, (C_1-C_3)carbonyl, or secondary amine; or phenyloxyphenyl where each phenyl may be independently unsubstituted, mono-, di-, or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, sulfonamide, (C_1-C_6)alkyl, (C_1-C_6)perhaloalkyl, (C_1-C_6)alkoxy, (C_1-C_6)alkyloxy-(C_1-C_6)alkoxy, mono- or di((C_1-C_6)alkyl)amino, or amino(C_1-C_6)alkyl;

Z_1 and Z_2 are each independently -NH-;

each m is independently 0 or 1; and

W is a monocyclic ring having the structure



wherein R_{11} and R_{12} are independently hydrogen; straight or branched chain (C_1-C_7)alkyl; phenyl, benzyl, or heteroaryl which may be unsubstituted, mono-, di- or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, (C_1-C_6)alkyl, (C_1-C_6)perfluoroalkyl, or (C_1-C_6)alkoxy; or phenyloxyphenyl where each phenyl may be independently unsubstituted, mono-, di- or trisubstituted with one or more of hydroxy, nitro, cyano, amino, halogen, sulfonamide, (C_1-C_6)alkyl, (C_1-C_6)perhaloalkyl, or (C_1-C_6)alkoxy.

5. The compound, pharmaceutically acceptable salt, hydrate, solvate, crystal form, diastereomer, prodrug, or mixture thereof according to claim 1, wherein the compound or salt is 3,5-bis-(4-phenoxyphenyl)-pyrazin-2-ylamine.

6. The compound, pharmaceutically acceptable salt, hydrate, solvate, crystal form, diastereomer, prodrug, or mixture thereof according to claim 1, wherein the compound or salt is 5-bromo-N3-(2-methoxybenzyl)-pyrazine-2,3-diamine.

7. The compound, pharmaceutically acceptable salt, hydrate, solvate, crystal form, diastereomer, prodrug, or mixture thereof according to claim 1, wherein the compound or salt is N3-(2-methoxybenzyl)-5-(4-phenoxyphenyl)-pyrazine-2,3-diamine.

8. The compound, pharmaceutically acceptable salt, hydrate, solvate, crystal form, diastereomer, prodrug, or mixture thereof according to claim 1, wherein the compound is (4-{6-[(4-chlorobenzyl)-methylamino]-pyrazin-2-yl}-phenyl)-piperidin-1-yl-methanone.

9. The compound, pharmaceutically acceptable salt, hydrate, solvate, crystal form, diastereomer, prodrug, or mixture thereof according to claim 1, wherein the compound is 4-chloro-N-(3-{6-[(4-chlorobenzyl)-methylamino]-pyrazin-2-yl}-phenyl)-benzamide.

10. The compound, pharmaceutically acceptable salt, hydrate, solvate, crystal form, diastereomer, prodrug, or mixture thereof according to claim 1, wherein the compound is 4-chloro-N-(3-{6-[(4-chlorobenzyl)-methylamino]-pyrazin-2-yl}-phenyl)-benzenesulfonamide.

11. The compound, pharmaceutically acceptable salt, hydrate, solvate, crystal form, diastereomer, prodrug, or mixture thereof according to claim 1, wherein the compound is (4-chlorobenzyl)-[6-(3-dibenzylamino-phenyl)-pyrimidin-4-yl]-methyl-amine.

12. The compound, pharmaceutically acceptable salt, hydrate, solvate, crystal form, diastereomer, prodrug, or mixture thereof according to claim 1, wherein the compound is N-(3-{4-[(4-methoxybenzyl)-methylamino]-pyrimidin-2-yl}-phenyl)-4-methylbenzamide.

13. The compound, pharmaceutically acceptable salt, hydrate, solvate, crystal form, diastereomer, prodrug, or mixture thereof according to claim 1, wherein the compound is 4-methyl-N-(3-{4-[methyl-(4-trifluoromethylbenzyl)-amino]-pyrimidin-2-yl}-phenyl)-benzamide.

14. The compound, pharmaceutically acceptable salt, hydrate, solvate, crystal form, diastereomer, prodrug, or mixture thereof according to claim 1, wherein in an in vitro assay of kinase modulation, the compound exhibits a IC_{50} value less than or equal to 25 micromolar.

15. A pharmaceutical composition comprising the compound, pharmaceutically acceptable salt, hydrate, solvate, crystal form, diastereomer, prodrug, or mixture thereof according to claim 1, and at least one pharmaceutically acceptable carrier or excipient.

16. A method of treating a kinase-implicated condition in a mammal, comprising administering to the mammal a therapeutically effective amount of a compound, pharmaceutically acceptable salt, hydrate, solvate, crystal form, diastereomer, prodrug, or mixture thereof according to claim 1.

17. The method of claim 16 wherein the mammal is a human.

18. The method of claim 16 wherein the mammal is a dog or cat.

19. The method of claim 16 wherein the mammal is a livestock animal.

20. A method for identifying a kinase, comprising contacting an organism, cell, or preparation comprising the kinase with a compound or salt according to claim 1, and detecting modulation of an activity of the kinase.